

The Hartford Department of Public Works manages traffic signals at 235 intersections in the city. The Hartford Fire Department provides signal maintenance functions such as bulb changing and repair of signal controllers. Many signals in Hartford are controlled by a centralized computer system, located at 525 Main Street, that sets the signal timing, adjusting it during peak traffic hours. Department traffic engineers analyze intersections for signal installation justification and determine if traffic signals are needed or if other traffic controls, such as stop and yield signs, are more appropriate. Signalization on State highways (i.e., Albany and Blue Hills Avenues) is controlled by the State of Connecticut, Department of Transportation, in Newington.

Request for new signals

Signal requests are often received from community groups, individual citizens and other city government sections. Traffic engineers follow up such requests with a study of the intersection to determine whether a traffic signal installation is justified. To conform with national standards, the signal must meet specific criteria found in the "Manual of Uniform Traffic Control Devices", published by the Federal Highway Administration.

This justification study takes into account:

- The number of vehicles and pedestrians using the intersection.
- The intersection's accident history.
- The intersection's proximity to major traffic routes, other traffic signals, schools and parks.
- Unusual conditions such as road curvature.

Benefits and disadvantages of traffic signals

Traffic patterns can dramatically change in and around an intersection when a signal is installed. When evaluating a potential signal location, full consideration of the benefits and disadvantages of signalization must be reviewed.

Benefits of signals

When installed under conditions that justify its use, a traffic signal provides the following benefits.

- Interrupt heavy traffic flows to permit crossing of traffic from minor side streets that could not otherwise move safely through the intersection.
- Increase the traffic handling capacity of an intersection.
- Reduce certain types of accidents (most notably broadside collisions).

Disadvantages of signals

Unwarranted or improperly placed signals create the following disadvantages.

- Increase overall travel time by adding stops and delays for thru traffic.
- Cause the diversion of traffic trying to avoid the signal onto residential streets.
- Cause a significant increase in rear end collisions.
- Cause excessive motorist disobedience of the signal indicators.

Signal Equipment Vernacular

A **controller** is the signal's brain and is programmed to allocate time to vehicle movement.

Loop detectors are wire circuits in the pavement placed just before the painted stop line for traffic. They are activated by the change in electrical induction caused by vehicles passing over or standing on them. They tell the signal controller when a vehicle is present.

Signal heads include red, yellow and green lens faces for traffic control.

Pedestrian signals consist of “Walk” and “Don’t Walk” indicators at intersections. In Hartford, “Walk” signs display for seven seconds; flashing “Don’t Walk” signs give the pedestrian sufficient time to clear the intersection. In the downtown area, most pedestrian walk signals actuate automatically between certain hours. The walk cycle is actuated by a pedestrian push button on signals in other parts of the city. When the push button is depressed, traffic does not stop immediately; a walk phase is actuated as part of the signal’s normal cycle.

Coordination of traffic signals

Traffic signals are timed so as to allow vehicles to progress through the city in a smooth manner without excessive stops. When traffic volumes are high (as in rush hours), some adjustments to timing may be necessary to allow for the heavier traffic flow.

Special signal functions

Flashing Red – When a signal is flashing red, drivers approaching it must stop before entering the intersection. A signal may flash red

either from design or from a malfunction.

Flashing Yellow – When a signal is flashing yellow, lower speed and proceed through the intersection with caution.

Dark signals – Signals that are not illuminated are most often the result of a power outage. The intersection should be treated as a four way stop and utmost caution should be used before proceeding through it.

Manual control – A police officer is manually overriding the signal to allow traffic to move through the intersection smoother.

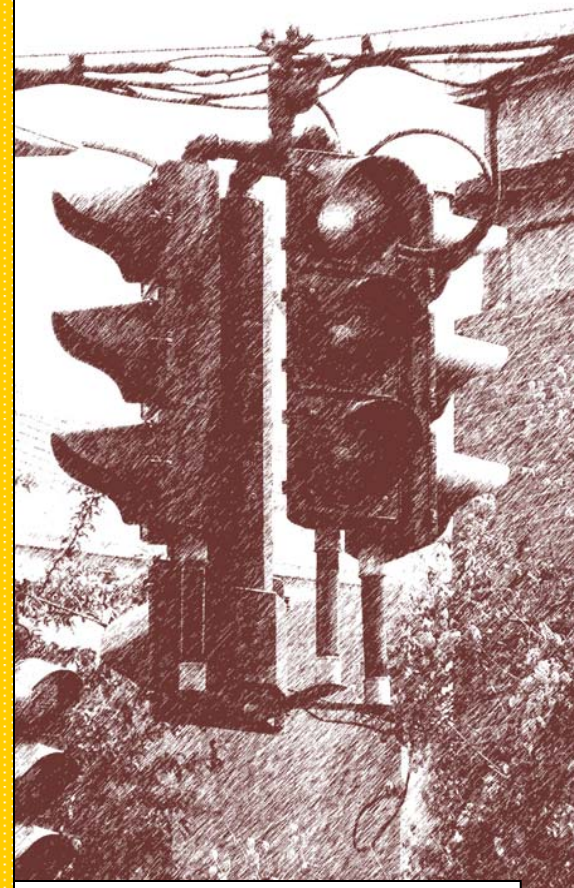
Useful telephone numbers

Traffic signal sequencing and timing problems–
Hartford Public Works, 522-4888 extension 6536

Burnt out bulbs, flashing signals, etc. – Hartford
Fire Department, Alarms and Signals – 543-8790

Signal malfunctions on State highways – 566-3156

Traffic Signals



CITY OF HARTFORD
DEPARTMENT OF PUBLIC WORKS
525 Main Street
Hartford, Connecticut 06103

